AMENDMENTS TO THE CLAIMS:

1. (Currently Amended) A method for registration of a mobile node on a packet-based communication network comprising the steps of:

requesting a care-off address for a mobile node by transmitting a request message to a first node on a first network, said first node capable of assigning a unique care-of addresses to each of a plurality of mobile nodes connecting to said first network;

receiving a care-of address for said mobile node[[,]] at a home network[[,]] under a first circumstance from [[a server computer on a]] the first network, wherein said care-of address is an expanded address identifying the network address location for said mobile node on the first network, and said care-of address is included in an information packet that comprises a source address data field containing the expanded address for the source node transmitting data in the information packet, a destination address data field containing the expanded address for the intended destination node ultimately receiving the data, and a payload data field containing the data transmitted from the source node to the destination node;

routing a message acknowledging receiving said care-of address to said first network;

allocating a node on the home network to forward information packets to the mobile node at the care-of address using a binding message transmitted on the first network to said node on the home network; and

updating a plurality of nodes with the mobile node registration address on the home network with said care-of address.

2. (Currently Amended) The method of registration of a mobile node on a packet-based communication network of Claim 1, further comprising the step of[[:]] requesting said care-of address from a serving mobility manager on the first network.

3. (Currently Amended) The method for registration of a mobile node on a packet-based communication network of Claim 2 further comprising the step of[[:]] allocating said mobile node care-of address on the first network after said request step.

4. (Original) The method for registration of a mobile node on a packet-based communication network of Claim 3 wherein the care-of address is transmitted through the serving mobility manager on the first network to said home network.

5. (Original) The method for registration of a mobile node on a packet-based communication network of Claim 3 wherein the care-of address is obtained from a pool of expanded addresses provided to said serving mobility manager on the first network.

6. (Original) The method for registration of a mobile node on a packet-based communication network of Claim 2 wherein said first network is a foreign network and said first circumstance is a power-up performed by said mobile node on said foreign network.

7. (Original) The method for registration of a mobile node on a packet-based communication network of Claim 2 wherein said first network is a foreign sub-network located on said home network and said first circumstance is a power-up performed by said mobile node on said foreign sub-network.

8. (Currently Amended) The method for registration of a mobile node on a packet-based communication network of Claim 1 wherein the care-of address is allocated by [[an AAA]] a server computer on said first network.

9. (Currently Amended) A method of performing a mobile node hand-off on a packet-based communication network, comprising the steps of:

responding at a second network to a request for said mobile hand-off from a first network, said response including allocating a care-of address, said care-of address having an expanded address capable of identifying the network address location for the mobile node on the first network, and said care-of address is included in an information packet that comprises a source address data field containing the expanded address for the source node transmitting data in the information packet, a destination address data field containing the expanded address for the intended destination node ultimately receiving the data, and a payload data field containing the data transmitted from the source node to the destination node;

transmitting said care-of address from a serving mobility manager on said first network to the mobile node, said serving mobility manager functioning to request said care-of address from a first node on the first network capable of allocating a unique care-of address;

allocating a router on the home network to route information packets to said mobile node at the care-of address using a binding message; and

updating the care-of address for the mobile node on a plurality of nodes on the first network and the home network.

10. (Currently Amended) The method of performing a mobile node hand-off on a packet-based communication network of Claim 9 wherein [[the mobile node receives said care-of address from a serving mobility manager]] the first node comprises a computer server.

11. (Original) The method of performing a mobile node hand-off on a packet-based communication network of Claim 9 wherein the first network is a first foreign sub-network on a home network.

12. (Original) The method of performing a mobile node hand-off on a packet-based communication network of Claim 10 wherein the second network is a second foreign sub-network on a home network.

13. (Original) The method of performing a mobile node hand-off on a packet-based communication network of Claim 9 wherein the first network is a first foreign network.

14. (Original) The method of performing a mobile node hand-off on a packet-based communication network of Claim 13 wherein the second network is a second foreign network.

15. (Currently Amended) The method of performing a mobile node hand-off on a packet-based communication network of Claim 9 further comprising the step[[s]] of[[:]]moving the mobile node to said second network after requesting said [[system]] mobile node hand-off.

16. (Currently Amended) The method of performing a mobile node hand-off on a packet-based communication network of Claim 9 further comprising the step[[s]] of[[:]]moving the mobile node to said second network before requesting said [[system]] mobile node hand-off.

17. (Currently Amended) A method of registering a mobile node on a packet-based communication network comprising the steps of:

transmitting a [[registration]] request message from [[a first network]] said mobile node to a [[server computer on a second network]] first router that initiates assigning a care-of address, said mobile node registering on a first network;

receiving a request from said first router at a server computer storing care-of addresses for allocating to registering mobile nodes on the first network;

allocating [[a]] the care-of address from said server computer [[on said second network]], said care-of address having an expanded address for identifying a network address location of said mobile node or other nodes, and said care-of address included in an information packet transmitted over said first network comprising a source address data field containing the expanded address for the source node transmitting data in the information packet, a destination address data field containing the expanded address for the intended destination node ultimately receiving the data, and a payload data field containing the data transmitted from the source node to the destination node;

transmitting said care-of address to a serving mobility manager on a second network, said serving mobility manager allocating a router on the second network to provide routing and other services to the mobile node; and

transmitting said care-of address to said allocated router and responding with a response message to said mobile node indicating registering is complete [[said first network]].

18. (Original) The method for registering a mobile node on a packet-based communication network of Claim 17 wherein the mobile node moves to the second network after the transmission of the [[registration]] request message.

19. (Currently Amended) The method of registering a mobile node on a packet-based communication network of Claim [[18]] 17 wherein the mobile node moves to the second network before the transmission of the [[registration]] request message.

20. (Currently Amended)The method for registering a mobile node on a packet-based communication network of Claim 17 wherein the care-of address is transmitted through an AAA server computer [[to]] on said first network.